

IN THE CLAIMS

Cancel each of original Claims 1-32, without prejudice.

1.-32. (Cancelled)

Please insert the following newly recited claims in substitution of original Claims 1-32.

33. (New) A method for manufacturing a plurality of smart cards, said method comprising the steps of:

loading into a computer a CAD drawing file having information that is representative of the configuration of one of the plurality of smart cards including the location of an integrated circuit (IC) on a non-conductive substrate, the location of wire bonds between the IC and a wire antenna to be located on the substrate, and the pattern of the wire antenna on the substrate relative to the IC;

accessing the information in the CAD drawing file;

making holes in the non-conductive substrate according to the information in the CAD drawing so as to accommodate respective ICs therewithin;

removing ICs from a supply thereof and placing the ICs into the holes made in the substrate;

embedding antenna wires in the substrate with a size, shape and number of windings according to the information in the CAD drawing file so that each antenna wire is located in proximity to a corresponding IC on the substrate;

bonding the antenna wires embedded in the substrate to respective ICs at wire bonds formed therebetween according to the information in the CAD drawing so that the antenna wires are electrically connected to the ICs;

laminating opposite sides of the substrate to cover the ICs and the antenna wires embedded therein; and

cutting the substrate into the plurality of smart cards, wherein each smart card has an IC and an antenna wire electrically connected thereto at a wire bond by which power is supplied to the IC and by which to enable the IC to communicate with a remote card reader.

34. (New) The method recited in Claim 33, including the additional steps of transferring the ICs from the supply of ICs in a shuttle to a robot; and

the robot removing the ICs from the shuttle and placing the ICs in respective ones of the holes in the substrate.

35. (New) The method recited in Claim 33, including the additional step of heating the antenna wires to be embedded in the substrate by means of an ultrasonic transducer so as to melt the substrate to receive said antenna wires.

36. (New) The method recited in Claim 33, including the additional step of robotically embedding the antenna wires in the substrate.

37. (New) The method recited in Claim 33, including the additional steps of continuously feeding a supply of antenna wire from a wiring horn to the substrate to be embedded therein, and cutting individual antenna wires from said supply to be located in proximity and bonded to respective ones of the ICs.

38. (New) The method recited in Claim 33, including the additional step of robotically bonding the antenna wires embedded in the substrate to respective ones of the ICs.

39. (New) The method recited in Claim 33, wherein the step of bonding the antenna wires to respective ones of the ICs is performed by thermo-compression welding.

40. (New) The method recited in Claim 33, including the additional steps of:

modifying the CAD drawing file, said modified CAD drawing file including modified information that is representative of at least one new feature of the configuration of the plurality of smart cards;

accessing the modified information in the CAD drawing file; and

controlling a robotic system to produce said new feature using the accessed information.

41. (New) The method recited in Claim 33, wherein the information in the CAD drawing file includes positional information in a Cartesian coordinate system.